

Calendar No. 616

108TH CONGRESS
2D SESSION

S. 1957

[Report No. 108–297]

To authorize the Secretary of the Interior to cooperate with the States on the border with Mexico and other appropriate entities in conducting a hydrogeologic characterization, mapping, and modeling program for priority transboundary aquifers, and for other purposes.

IN THE SENATE OF THE UNITED STATES

NOVEMBER 25, 2003

Mr. BINGAMAN (for himself, Mr. DOMENICI, and Mr. KYL) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

JULY 7, 2004

Reported by Mr. DOMENICI, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

A BILL

To authorize the Secretary of the Interior to cooperate with the States on the border with Mexico and other appropriate entities in conducting a hydrogeologic characterization, mapping, and modeling program for priority transboundary aquifers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “United States-Mexico
3 Transboundary Aquifer Assessment Act”.

4 **SEC. 2. FINDINGS AND PURPOSE.**

5 (a) FINDINGS.—Congress finds that—

6 (1) rapid population growth in the United
7 States-Mexico border region over the last decade has
8 placed major strains on limited water supplies in the
9 region;

10 (2) water quantity and quality issues are likely
11 to be the determining and limiting factors affecting
12 future economic development, population growth,
13 and human health in the border region;

14 (3) increasing use of groundwater resources in
15 the border region by municipal and other water
16 users has raised serious questions concerning the
17 long-term availability of the water supply;

18 (4) cooperation between the United States and
19 Mexico in assessing and understanding
20 transboundary aquifers is necessary for the success-
21 ful management of shared groundwater resources by
22 State and local authorities in the United States and
23 appropriate authorities in Mexico, including manage-
24 ment that avoids conflict between the United States
25 and Mexico;

1 (5) while there have been some studies of bina-
 2 tional groundwater resources along the United
 3 States-Mexico border; additional data and analyses
 4 are needed to develop an accurate understanding of
 5 the long-term availability of useable water supplies
 6 from transboundary aquifers; and

7 (6) the Border States—

8 (A) are primarily responsible for the man-
 9 agement and allocation of groundwater re-
 10 sources within the respective boundaries of the
 11 Border States; and

12 (B) should have a cooperative role in the
 13 analysis and characterization of transboundary
 14 aquifers.

15 (b) PURPOSE.—The purpose of this Act is to direct
 16 the Secretary of the Interior to establish a United States-
 17 Mexico transboundary aquifer assessment program to—

18 (1) systematically assess priority transboundary
 19 aquifers; and

20 (2) provide the scientific foundation necessary
 21 for State and local officials to address pressing
 22 water resource challenges in the United States-Mex-
 23 ico border region.

24 **SEC. 3. DEFINITIONS.**

25 In this Act:

1 (1) AQUIFER.—The term “aquifer” means a
2 subsurface water-bearing geologic formation from
3 which significant quantities of water may be ex-
4 tracted.

5 (2) BORDER STATE.—The term “Border State”
6 means each of the States of Arizona, California,
7 New Mexico, and Texas.

8 (3) INDIAN TRIBE.—The term “Indian tribe”
9 means an Indian tribe, band, nation, or other orga-
10 nized group or community—

11 (A) that is recognized as eligible for the
12 special programs and services provided by the
13 United States to Indians because of their status
14 as Indians; and

15 (B) the reservation of which includes a
16 transboundary aquifer within the exterior
17 boundaries of the reservation.

18 (4) PRIORITY TRANSBOUNDARY AQUIFER.—The
19 term “priority transboundary aquifer” means a
20 transboundary aquifer that has been designated for
21 study and analysis under the program.

22 (5) PROGRAM.—The term “program” means
23 the United States-Mexico transboundary aquifer as-
24 sessment program established under section 4(a).

1 (6) RESERVATION.—The term “reservation”
 2 means land that has been set aside or that has been
 3 acknowledged as having been set aside by the United
 4 States for the use of an Indian tribe, the exterior
 5 boundaries of which are more particularly defined in
 6 a final tribal treaty, agreement, executive order,
 7 Federal statute, secretarial order, or judicial deter-
 8 mination.

9 (7) SECRETARY.—The term “Secretary” means
 10 the Secretary of the Interior, acting through the Di-
 11 rector of the United States Geological Survey.

12 (8) TRANSBOUNDARY AQUIFER.—The term
 13 “transboundary aquifer” means an aquifer that
 14 underlies the boundary between the United States
 15 and Mexico.

16 (9) TRI-REGIONAL PLANNING GROUP.—The
 17 term “Tri-Regional Planning Group” means the bi-
 18 national planning group comprised of—

19 (A) the Junta Municipal de Agua y
 20 Saneamiento de Ciudad Juarez;

21 (B) the El Paso Water Utilities Public
 22 Service Board; and

23 (C) the Lower Rio Grande Water Users
 24 Organization.

1 ~~(10)~~ WATER RESOURCES RESEARCH INSTI-
 2 TUTES.—The term “water resources research insti-
 3 tutes” means the institutes within the Border States
 4 established under section 104 of the Water Re-
 5 sources Research Act of 1984 (42 U.S.C. 10303).

6 **SEC. 4. ESTABLISHMENT OF PROGRAM.**

7 ~~(a)~~ IN GENERAL.—The Secretary, in consultation
 8 and cooperation with the Border States, the Water Re-
 9 sources Research Institutes, Sandia National Labora-
 10 tories, and other appropriate entities in the United States
 11 and Mexico, shall carry out the United States-Mexico
 12 transboundary aquifer assessment program to charac-
 13 terize, map, and model transboundary groundwater re-
 14 sources along the United States-Mexico border at a level
 15 of detail determined to be appropriate for the particular
 16 aquifer.

17 ~~(b)~~ OBJECTIVES.—The objectives of the program are
 18 to—

19 ~~(1)~~ develop and implement an integrated sci-
 20 entific approach to assess transboundary ground-
 21 water resources, including—

22 ~~(A)~~(i) identifying fresh and saline
 23 transboundary aquifers; and

24 (ii) prioritizing the transboundary aquifers
 25 for further analysis by assessing—

- 1 (I) the proximity of the transboundary
2 aquifer to areas of high population density;
- 3 (II) the extent to which the
4 transboundary aquifer is used; and
- 5 (III) the susceptibility of the
6 transboundary aquifer to contamination;
- 7 (B) evaluating all available data and publi-
8 cations as part of the development of study
9 plans for each priority transboundary aquifer;
- 10 (C) creating a geographic information sys-
11 tem database to characterize the spatial and
12 temporal aspects of each priority transboundary
13 aquifer; and
- 14 (D) using field studies, including support
15 for and expansion of ongoing monitoring and
16 metering efforts, to develop any additional data
17 that are needed to define aquifer characteristics
18 to the extent necessary to enable the develop-
19 ment of groundwater flow models to assess sus-
20 tainable water yields for each priority
21 transboundary aquifer;
- 22 (2) expand existing agreements, as appropriate,
23 between the United States Geological Survey, the
24 Border States, the Water Resources Research Insti-

1 tutes, and appropriate authorities in the United
 2 States and Mexico, to—

- 3 (A) conduct joint scientific investigations;
- 4 (B) archive and share relevant data; and
- 5 (C) carry out any other activities con-
 6 sistent with the program; and
- 7 (3) produce scientific products for each priority
 8 transboundary aquifer to provide the scientific infor-
 9 mation needed by water managers and natural re-
 10 source agencies on both sides of the United States-
 11 Mexico border to effectively accomplish the missions
 12 of the managers and agencies.

13 (c) DESIGNATION OF CERTAIN AQUIFERS.—For pur-
 14 poses of the program, the Secretary shall designate the
 15 Hueco Bolson and Mesilla aquifers underlying parts of
 16 Texas, New Mexico, and Mexico as priority transboundary
 17 aquifers.

18 (d) COOPERATION WITH MEXICO.—To ensure a com-
 19 prehensive assessment of transboundary aquifers, the Sec-
 20 retary shall, to the maximum extent practicable, work with
 21 appropriate Federal agencies and other organizations to
 22 develop partnerships with, and receive input from, relevant
 23 organizations in Mexico to carry out the program.

24 (e) GRANTS AND COOPERATIVE AGREEMENTS.—The
 25 Secretary may provide grants or enter into cooperative

1 agreements and other agreements with the Water Re-
2 source Research Institutes and other Border State entities
3 to carry out the program.

4 **SEC. 5. STATE AND TRIBAL ROLE.**

5 (a) COORDINATION.—The Secretary shall coordinate
6 the activities carried out under the program with—

7 (1) the appropriate water resource agencies in
8 the Border States; and

9 (2) any affected Indian tribes.

10 (b) NEW ACTIVITY.—After the date of enactment of
11 this Act, the Secretary shall not initiate any field studies
12 to develop data or develop any groundwater flow models
13 for a priority transboundary aquifer under the program
14 before consulting with, and coordinating the activity with,
15 the Border State water resource agency that has jurisdic-
16 tion over the aquifer.

17 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

18 (a) IN GENERAL.—There are authorized to be appro-
19 priated to carry out this Act \$50,000,000 for the period
20 of fiscal years 2005 through 2014.

21 (b) DISTRIBUTION OF FUNDS.—Of the amounts
22 made available under subsection (a), 50 percent shall be
23 made available to the Water Resource Research Institutes
24 to provide funding to appropriate entities in the Border
25 States (including Sandia National Laboratories, State

1 agencies, universities, the Tri-Regional Planning Group,
 2 and other relevant organizations) and Mexico to conduct
 3 activities under the program, including the binational col-
 4 lection and exchange of scientific data.

5 **SEC. 7. REPORTS.**

6 Not later than 5 years after the date of enactment
 7 of this Act, and on completion of the program in fiscal
 8 year 2014, the Secretary shall submit to the appropriate
 9 water resource agency in the Border States, an interim
 10 and final report, respectively, that describes—

11 (1) any activities carried out under the pro-
 12 gram;

13 (2) any conclusions of the Secretary relating to
 14 the status of transboundary aquifers; and

15 (3) the level of participation in the program of
 16 entities in Mexico.

17 **SECTION 1. SHORT TITLE.**

18 *This Act may be cited as the “United States-Mexico*
 19 *Transboundary Aquifer Assessment Act”.*

20 **SEC. 2. PURPOSE.**

21 *The purpose of this Act is to direct the Secretary of*
 22 *the Interior to establish a United States-Mexico*
 23 *transboundary aquifer assessment program to—*

24 (1) *systematically assess priority transboundary*
 25 *aquifers; and*

1 (2) *provide the scientific foundation necessary*
 2 *for State and local officials to address pressing water*
 3 *resource challenges in the United States-Mexico border*
 4 *region.*

5 **SEC. 3. DEFINITIONS.**

6 *In this Act:*

7 (1) *AQUIFER.—The term “aquifer” means a sub-*
 8 *surface water-bearing geologic formation from which*
 9 *significant quantities of water may be extracted.*

10 (2) *BORDER STATE.—The term “Border State”*
 11 *means each of the States of Arizona, California, New*
 12 *Mexico, and Texas.*

13 (3) *INDIAN TRIBE.—The term “Indian tribe”*
 14 *means an Indian tribe, band, nation, or other orga-*
 15 *nized group or community—*

16 *(A) that is recognized as eligible for the spe-*
 17 *cial programs and services provided by the*
 18 *United States to Indians because of their status*
 19 *as Indians; and*

20 *(B) the reservation of which includes a*
 21 *transboundary aquifer within the exterior bound-*
 22 *aries of the reservation.*

23 (4) *PRIORITY TRANSBOUNDARY AQUIFER.—The*
 24 *term “priority transboundary aquifer” means a*

1 *transboundary aquifer that has been designated for*
 2 *study and analysis under the program.*

3 (5) *PROGRAM.*—*The term “program” means the*
 4 *United States-Mexico transboundary aquifer assess-*
 5 *ment program established under section 4(a).*

6 (6) *RESERVATION.*—*The term “reservation”*
 7 *means land that has been set aside or that has been*
 8 *acknowledged as having been set aside by the United*
 9 *States for the use of an Indian tribe, the exterior*
 10 *boundaries of which are more particularly defined in*
 11 *a final tribal treaty, agreement, executive order, Fed-*
 12 *eral statute, secretarial order, or judicial determina-*
 13 *tion.*

14 (7) *SECRETARY.*—*The term “Secretary” means*
 15 *the Secretary of the Interior, acting through the Di-*
 16 *rector of the United States Geological Survey.*

17 (8) *TRANSBOUNDARY AQUIFER.*—*The term*
 18 *“transboundary aquifer” means an aquifer that*
 19 *underlies the boundary between the United States and*
 20 *Mexico.*

21 (9) *TRI-REGIONAL PLANNING GROUP.*—*The term*
 22 *“Tri-Regional Planning Group” means the binational*
 23 *planning group comprised of—*

24 (A) *the Junta Municipal de Agua y*
 25 *Saneamiento de Ciudad Juarez;*

1 (B) *the El Paso Water Utilities Public*
 2 *Service Board; and*

3 (C) *the Lower Rio Grande Water Users Or-*
 4 *ganization.*

5 (10) *WATER RESOURCES RESEARCH INSTI-*
 6 *TUTES.—The term “water resources research insti-*
 7 *tutes” means the institutes within the Border States*
 8 *established under section 104 of the Water Resources*
 9 *Research Act of 1984 (42 U.S.C. 10303).*

10 **SEC. 4. ESTABLISHMENT OF PROGRAM.**

11 (a) *IN GENERAL.—The Secretary, in consultation and*
 12 *cooperation with the Border States, the water resources re-*
 13 *search institutes, Sandia National Laboratories, and other*
 14 *appropriate entities in the United States and Mexico, shall*
 15 *carry out the United States-Mexico transboundary aquifer*
 16 *assessment program to characterize, map, and model*
 17 *transboundary groundwater resources along the United*
 18 *States-Mexico border at a level of detail determined to be*
 19 *appropriate for the particular aquifer.*

20 (b) *OBJECTIVES.—The objectives of the program are*
 21 *to—*

22 (1) *develop and implement an integrated sci-*
 23 *entific approach to assess transboundary groundwater*
 24 *resources, including—*

1 (A)(i) *identifying fresh and saline*
 2 *transboundary aquifers; and*

3 (ii) *prioritizing the transboundary aquifers*
 4 *for further analysis by assessing—*

5 (I) *the proximity of the transboundary*
 6 *aquifer to areas of high population density;*

7 (II) *the extent to which the*
 8 *transboundary aquifer is used;*

9 (III) *the susceptibility of the*
 10 *transboundary aquifer to contamination;*
 11 *and*

12 (IV) *any other relevant criteria;*

13 (B) *evaluating all available data and publi-*
 14 *cations as part of the development of study plans*
 15 *for each priority transboundary aquifer;*

16 (C) *creating a new, or enhancing an exist-*
 17 *ing, geographic information system database to*
 18 *characterize the spatial and temporal aspects of*
 19 *each priority transboundary aquifer; and*

20 (D) *using field studies, including support*
 21 *for and expansion of ongoing monitoring and*
 22 *metering efforts, to develop—*

23 (i) *the additional data necessary to*
 24 *adequately define aquifer characteristics;*
 25 *and*

1 (ii) scientifically sound groundwater
 2 flow models to assist with State and local
 3 water management and administration, in-
 4 cluding modeling of relevant groundwater
 5 and surface water interactions;

6 (2) expand existing agreements, as appropriate,
 7 between the United States Geological Survey, the Bor-
 8 der States, the water resources research institutes, and
 9 appropriate authorities in the United States and
 10 Mexico, to—

11 (A) conduct joint scientific investigations;

12 (B) archive and share relevant data; and

13 (C) carry out any other activities consistent
 14 with the program; and

15 (3) produce scientific products for each priority
 16 transboundary aquifer that—

17 (A) are capable of being broadly distributed;

18 and

19 (B) provide the scientific information need-
 20 ed by water managers and natural resource
 21 agencies on both sides of the United States-Mex-
 22 ico border to effectively accomplish the missions
 23 of the managers and agencies.

24 (c) DESIGNATION OF PRIORITY TRANSBOUNDARY
 25 AQUIFERS.—

1 (1) *IN GENERAL.*—For purposes of the program,
2 the Secretary shall designate as priority
3 transboundary aquifers—

4 (A) the Hueco Bolson and Mesilla aquifers
5 underlying parts of Texas, New Mexico, and
6 Mexico; and

7 (B) the Santa Cruz River Valley aquifers
8 underlying Arizona and Sonora, Mexico.

9 (2) *ADDITIONAL AQUIFERS.*—The Secretary
10 shall, using the criteria under subsection (b)(1)(A)(ii),
11 evaluate and designate additional priority
12 transboundary aquifers.

13 (d) *COOPERATION WITH MEXICO.*—To ensure a com-
14 prehensive assessment of transboundary aquifers, the Sec-
15 retary shall, to the maximum extent practicable, work with
16 appropriate Federal agencies and other organizations to de-
17 velop partnerships with, and receive input from, relevant
18 organizations in Mexico to carry out the program.

19 (e) *GRANTS AND COOPERATIVE AGREEMENTS.*—The
20 Secretary may provide grants or enter into cooperative
21 agreements and other agreements with the water resources
22 research institutes and other Border State entities to carry
23 out the program.

1 **SEC. 5. IMPLEMENTATION OF PROGRAM.**

2 (a) *COORDINATION WITH STATES, TRIBES, AND*
3 *OTHER ENTITIES.*—*The Secretary shall coordinate the ac-*
4 *tivities carried out under the program with—*

5 (1) *the appropriate water resource agencies in*
6 *the Border States;*

7 (2) *any affected Indian tribes; and*

8 (3) *any other appropriate entities that are con-*
9 *ducting monitoring and metering activity with re-*
10 *spect to a priority transboundary aquifer.*

11 (b) *NEW ACTIVITY.*—*After the date of enactment of this*
12 *Act, the Secretary shall not initiate any new field studies*
13 *or analyses under the program before consulting with, and*
14 *coordinating the activity with, any Border State water re-*
15 *source agencies that have jurisdiction over the aquifer.*

16 (c) *STUDY PLANS; COST ESTIMATES.*—

17 (1) *IN GENERAL.*—*The Secretary shall work*
18 *closely with appropriate Border State water resource*
19 *agencies, water resources research institutes, and*
20 *other relevant entities to develop a study plan,*
21 *timeline, and cost estimate for each priority*
22 *transboundary aquifer to be studied under the pro-*
23 *gram.*

24 (2) *REQUIREMENTS.*—*A study plan developed*
25 *under paragraph (1) shall, to the maximum extent*
26 *practicable—*

1 (A) integrate existing data collection and
 2 analyses conducted with respect to the priority
 3 transboundary aquifer;

4 (B) if applicable, improve and strengthen
 5 existing groundwater flow models developed for
 6 the priority transboundary aquifer; and

7 (C) be consistent with appropriate State
 8 guidelines and goals.

9 **SEC. 6. EFFECT.**

10 *Nothing in this Act affects—*

11 (1) the jurisdiction or responsibility of a Border
 12 State with respect to managing surface or ground-
 13 water resources in the Border State; or

14 (2) the water rights of any person or entity
 15 using water from a transboundary aquifer.

16 **SEC. 7. REPORTS.**

17 *Not later than 5 years after the date of enactment of*
 18 *this Act, and on completion of the program in fiscal year*
 19 *2014, the Secretary shall submit to the appropriate water*
 20 *resource agency in the Border States, an interim and final*
 21 *report, respectively, that describes—*

22 (1) any activities carried out under the program;

23 (2) any conclusions of the Secretary relating to
 24 the status of transboundary aquifers; and

1 (3) *the level of participation in the program of*
2 *entities in Mexico.*

3 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

4 (a) *IN GENERAL.*—*There are authorized to be appro-*
5 *priated to carry out this Act \$50,000,000 for the period of*
6 *fiscal years 2005 through 2014.*

7 (b) *DISTRIBUTION OF FUNDS.*—*Of the amounts made*
8 *available under subsection (a), 50 percent shall be made*
9 *available to the water resources research institutes to pro-*
10 *vide funding to appropriate entities in the Border States*
11 *(including Sandia National Laboratories, State agencies,*
12 *universities, the Tri-Regional Planning Group, and other*
13 *relevant organizations) and Mexico to conduct activities*
14 *under the program, including the binational collection and*
15 *exchange of scientific data.*

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